Andrew Schechtman-Rook
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EXPERIENCE

Senior Manager, Data Science 2018-Present
Capital One

- Deployed the first cloud-based credit card underwriting model in the company via a dockerized Python API, with an estimated incremental value of $35MM per year.
- Led development of modernized model monitoring package, decreasing the time and effort required to complete compliance-required model monitoring.

Manager, Data Science 2016-2018
Capital One

- Built a Python library to facilitate the creation of robust, production-ready data analysis pipelines, saving hundreds of hours of R&D effort across multiple production models.
- Led development of a prototype automated machine learning model deployment scheme for cloud-based applications, influencing the development direction for the company-wide credit card application processing platform.
- Constructed a Python model to predict credit card spend based on application information 25% better than existing procedure, and advised leadership on its value and proper use.

Principal Data Scientist 2014-2016
Capital One Labs

- Implemented a novel approach to deliver internal technical trainings, providing over 5000 hours of classes with no instructors.
- Programmed and deployed an interactive course completion dashboard using Flask and dc.js to provide progress reports to individual students as well as company leadership.

Data Science Fellow 2014
The Data Incubator

- Formulated a model to predict flight delay times based on historical airline on-time arrivals.
- Created a web interface to provide interactive itinerary input and visualizations to intuitively display model results.

Graduate and Postdoctoral Researcher 2007-2014
University of Wisconsin-Madison

- Devised a fast Voronoi Tessellation algorithm in Python to adaptively bin images, preserving spatial resolution while maximizing signal in images with over one million pixels.
- Assembled a hybrid C++/Python pipeline to process hundreds of high-resolution images with minimal user intervention, resulting in a 10x increase in analysis precision.

SKILLS

Programming: Python (numpy, scipy, pandas, sklearn, xgboost, matplotlib), shell scripting
Databases and Web Design: Flask, MySQL/PostgreSQL
Cloud Computing/Devops: AWS, Ansible, Docker, CircleCI, Jenkins
Operating Systems: Linux, Mac OSX
Data Analysis: Parallel and distributed computing, machine learning, nonlinear optimization, image processing

EDUCATION

PhD, Astronomy, University of Wisconsin-Madison December 2013
MS, Astronomy, University of Wisconsin-Madison June 2009
BS, Astronomy, Case Western Reserve University May 2007